# UNITED STATES PATENT AND TRADEMARK OFFICE

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/086,474 | 03/01/2002 | William A. White | SAA-81 | 2115 |

| 23569 | 7590 | 08/08/2005 |
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| EXAMINER |
|---|
| LIN, KENNY S |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2154 | |

DATE MAILED: 08/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

| | Application No. | Applicant(s) |
|---|---|---|
| **Office Action Summary** | 10/086,474 | WHITE, WILLIAM A. |
| | Examiner | Art Unit |
| | Kenny Lin | 2154 |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on _01 March 2002_.

2a)☐ This action is **FINAL**.    2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) _1-29_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-29_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _6/18/2002_.

4)☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

## DETAILED ACTION

1.      Claims 1-29 are presented for examination.


2.      The IDS submitted on 6/18/2002 has been considered by the examiner.


### *Claim Rejections - 35 USC § 112*

3.      The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.


4.      Claims 1-29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1-29 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. The omitted steps are: the claims do not define how a wanted message is accepted.

Claims 1-29 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: the interrelationship of the filter bits for filtering messages by comparing message ID.

5.      Claims 4, 8-23 and 27 would be allowable if rewritten to overcome the rejection(s) under

35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations

of the base claim and any intervening claims.


## Claim Rejections - 35 USC § 103

6.      The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.


7.      Claims 1-2, 5-7, 24-25 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Liao, US 2003/0108043, in view of Walsh et al, US 2003/0135636.


8.      As per claim 1, Liao taught the invention substantially as claimed including a method for

optimizing communication in a network, the communication involving wanted and unwanted

network messages wherein a set of filters are configured to accept all wanted network messages

and minimize the acceptance of unwanted messages in accordance with a selection criteria, the

method comprising the steps of:

    a.  Configuring a first filter to receive all wanted messages, the first filter comprising

       a defined bit and an undefined bit, each defined bit being either in a first state or

       in a second state (pp. 0034, 0037-0043, 0055, 0072);

    b.  Setting a filter sets for filtering (pp. 0056);

    c.   Determining potential configurations of the first set of filters wherein each

        potential configuration of the first set of filters is capable of accepting all wanted

        network messages (pp. 0073); and

    d.   Optimizing each potential configuration of the first set of filters (pp. 0072-0077).

9.     Liao further taught to use multiple classifier elements operating in parallel for handling multiple filter bit patterns (pp. 0033). Liao did not specifically teach to set a second filter equal to the first filter. Walsh taught to use multiple identical filters for filtering at different time frame (pp. 0024). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Liao and Walsh because Walsh's teaching of using identical filters to enables Liao's method to filter messages at different time frame (see Walsh, pp. 0024).

10.    As per claim 2, Liao and Walsh taught the invention substantially as claimed in claim 1. Liao further taught to select an optimum configuration of the first set of filters in response to a selection criteria (pp. 0072-0074), the optimum configuration of the first set of filters being selected from the potential configurations of the first set of filters (pp. 0072-0077).

11.    As per claim 5, Liao and Walsh taught the invention substantially as claimed in claim 1. Liao further taught to include the step of initializing the first filter with one of the wanted network messages (pp. 0070).

12.      As per claim 6, Liao and Walsh taught the invention substantially as claimed in claim 2.

Liao further taught that the selection criteria includes minimizing the amount of unwanted

messages passing through the first set of filters (pp. 0033-0034, 0064).


13.      As per claim 7, Liao and Walsh taught the invention substantially as claimed in claim 6.

Liao further taught that the selection criteria includes prioritizing the filtering to reject a specific

unwanted messages (pp. 0067-0069).


14.      As per claim 24, a computer readable medium for optimizing communication in a

network, the communication involving wanted and unwanted network messages wherein a set of

filters are configured to accept all wanted network messages and minimize the acceptance of

unwanted messages in accordance with a selection criteria, the computer readable medium

comprising:

   a.  A first segment for configuring a first filter to receive all wanted messages, the

       first filter comprising a defined bit and an undefined bit, each defined bit being

       either in a first state or in a second state (pp. 0034, 0037-0043, 0055, 0072);

   b.  A second segment for setting a filter sets for filtering (pp. 0056); and,

   c.  A third segment for determining potential configurations of the first set of filters

       wherein each potential configuration of the first set of filters is capable of

       accepting all wanted network messages (pp. 0073); and,

   d.  A fourth segment for optimizing each potential configuration of the first set of

       filter (pp. 0072-0077).

15.     Liao further taught to use multiple classifier elements operating in parallel for handling multiple filter bit patterns (pp. 0033). Liao did not specifically teach to set a second filter equal to the first filter. Walsh taught to use multiple identical filters for filtering at different time frame (pp. 0024). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Liao and Walsh because Walsh's teaching of using identical filters to enables Liao's method to filter messages at different time frame (see Walsh, pp. 0024).

16.     As per claim 25, Liao and Walsh taught the invention substantially as claimed in claim 24. Liao further taught a fifth segment for selecting an optimum configuration of the first set of filters in response to a selection criteria, the optimum configuration of the first set of filters being selected form the potential configurations of the first set of filters (pp. 0072-0077).

17.     As per claim 28, Liao and Walsh taught the invention substantially as claimed in claim 24. Liao further taught that the selection criteria includes minimizing the amount of unwanted messages passing through the first set of filters (pp. 0033-0034, 0064).

18.     Claims 3, 26 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liao and Walsh as applied to claims 1 and 24 above, and further in view of Rajski, US 6,662,327.

19.    As per claim 3, Liao and Walsh taught the invention substantially as claimed in claim 1.

Liao further taught to determine potential configurations of the first set of filters comprises the

steps of: setting an undefined bit of the first filter to the first state (pp. 0073; P); continuing to set

remaining undefined bits for the first until each undefined bit of the first filter have been

correspondingly defined wherein a determined potential configurations of the first set of filters

exists for each initially undefined bit (pp. 0073; P). Liao and Walsh did not specifically teach to

set the corresponding undefined bit of the second filter to the second state. Rajski taught that

undefined bits can be set to either 0 or 1 (col.11, lines 65-67). It would have been obvious to one

of ordinary skill in the art at the time the invention was made to combine the teachings of Liao,

Walsh and Rajski and using the teachings of Rajski to set the undefined bit to either 0 or 1 as

desired in Liao and Walsh's method.


20.    As per claim 26, Liao and Walsh taught the invention substantially as claimed in claim

24. Liao further taught that determining potential configurations of the first set of filters

comprises the steps of: a sixth segment for setting an undefined bit of the first filter to the first

state (pp. 0073; P); and, an eighth segment for continuing to define remaining undefined bits for

the first filter in like manner until each undefined bit of the first filter has been correspondingly

defined wherein a determined potential configuration of the first set of filters exists for each

initially undefined bit (pp. 0073; P). Liao and Walsh did not specifically teach a seventh

segment for setting the corresponding undefined bit of the second filter to the second state.

Rajski taught that undefined bits can be set to either 0 or 1 (col.11, lines 65-67). It would have

been obvious to one of ordinary skill in the art at the time the invention was made to combine the

teachings of Liao, Walsh and Rajski and using the teachings of Rajski to set the undefined bit to either 0 or 1 as desired in Liao and Walsh's method.

21. As per claim 29, Liao, Walsh and Rajski taught the invention substantially as claimed in claim 26. Liao further taught that the selection criteria includes prioritizing the filtering to reject a specific unwanted message (pp. 0067-0069).

## *Conclusion*

22. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Chang et al, US 2002/0102967.

Gunsay, US 6,781,961.

Canale et al, US 5,619,648.

Duvall et al, US 5,884,033.

Douceur et al, US 5,995,971.

Stockwell et al, US 6,072,942.

Narasimhan et al, US 6,073,165.

Horvitz et al, US 6,161,130.

McCormick et al, US 6,421,709.

Afek et al, US 6,633,860.

Campailla et al, Efficient Filtering in Publish-Subscribe Systems using Binary Decision Diagrams, IEEE Computer Society, 2001, pages 443-452.

23.    A shortened statutory period for reply to this Office action is set to expire THREE

MONTHS from the mailing date of this action.


24.    Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Kenny Lin whose telephone number is (571) 272-3968. The

examiner can normally be reached on 8 AM to 5 PM Tue.-Fri. and every other Monday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, John Follansbee can be reached on (571) 272-3964. The fax phone number for the

organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ksl
August 4, 2005

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